June 2022
DNB Research Newsletter

DeNederlandscheBank
EUROSYSTEEM

Research highlights

1. A Structural Investigation on Quantitative Easing

In this forthcoming article in the Review of Economics and Statistics, Gregor Boehl (University of Bonn), Gavin Goy (DNB) and Felix Strobel (Deutsche Bundesbank) contribute to the controversial debate on the macroeconomic effect of Quantitative Easing (QE) in the United States. While there is an emerging consensus that QE contributed to an easing of financial conditions, evidence on its effects on the real economy remains mixed. In contrast to the gist of the literature, the authors find that the Federal Reserve's bond purchases lowered inflation. Read more

2. The effect of introducing a Loan-to-Value limit on home ownership

In this DNB working paper we analyze the impact of introducing a Loan-to-Value (LTV) limit in The Netherlands on the probability of first-time buyers becoming homeowners. We are able to disentangle the effect of the LTV limit from housing market developments by constructing a treatment and control group using parents' financial wealth as a proxy for being liquidity constrained. We show that introducing the LTV limit has reduced the probability of becoming a homeowner by approximately 6%. This reduction is relatively small and suggests that other factors, notably housing market developments, have been more important. Read more

3. Reactions of household inflation expectations to a symmetric inflation target and high inflation

This DNB working paper shows that euro area inflation expectations of Dutch households did not react to the ECB announcement of a 2% symmetric inflation target in July 2021. Still, they did respond to the substantial increase in realized inflation above the target later that year. In fact, short- and long-term expectations of euro area inflation, as well as households' expected probabilities of high inflation (above 4%), have clearly risen since the past summer and long-term euro area inflation expectations of Dutch households have become less well anchored. Read more

4. Consequences of the war in Ukraine for the economy of the Netherlands

This DNB Analysis offers an overview of the possible effects of the war in Ukraine on the Dutch economy. Effects can occur, among other things, through increased energy prices, international trade and value chains and can also affect the financial sector. The consequences of the war and the sanctions against Russia seem limited for the Dutch financial sector for the time being. However, the analysis underlines

that there are many uncertainties surrounding the economic outlook, as at present it is unclear how the war in Ukraine will play out.
Read more

5. DNB-Riksbank-Bundesbank 6th Annual Macroprudential Conference - June 20-21 2022

On June 20-21 2022, De Nederlandsche Bank hosted the 6th Annual Macroprudential Conference, organized jointly with Sveriges Riksbank and Deutsche Bundesbank. The conference brought together academics, policymakers, and practitioners to discuss topics related to financial stability and macroprudential policy. The program included a keynote speech by Pablo Hernández de Cos, six paper presentations, and a panel discussion. Link to program.
Read more

Publications (since March 2022)

Working Papers

746 - No pension and no house? The effect of LTV limits on the housing wealth accumulation of self-employed
Mauro Mastrogiacomo and Cindy Biesenbeek

745 - The Eurosystem's bond market share at an all-time high: what does it mean for repo markets?
Tomás Carrera de Souza and Tom Hudepohl

744 – Central bank communication with the general public: promise or false hope?
Alan Blinder, Michael Ehrmann, Jakob de Haan and David-Jan Jansen

743 - Reactions of household inflation expectations to a symmetric inflation target and high inflation
Gabriele Galati, Richhild Moessner and Maarten van Rooij

742 - Foreign bias in equity portfolios: informational advantage or familiarity bias?
Martijn Boermans, Ian Cooper, Piet Sercu and Rosanne Vanpée

Liquidity coverage ratios and monetary policy credit in the time of Corona
Viktoriya Gocheva, Yvo Mudde and Jens Tapking
ECB Working Paper No. 2668.

DNB Analyses

Inflatie en monetair beleid
Marco Hoeberichts and Annelie Petersen

De invloed van het corona steun- en herstelpakket op het Nederlandse bedrijfsleven
Jasper de Winter and Beer Pruijt

Published journal articles

Overcoming misleading carbon footprints in the financial sector
Artjom Janssen, Wouter Botzen, Justin Dijk and Patty Duijm
Climate Policy

Foreign funded credit: Funding the credit cycle?
Patty Duijm
International Finance

Determinants of trust in banks' payment services during COVID: an exploration using daily data
Michiel Bijlsma, Carin van der Cruijsen and Jester Koldijk
De Economist

The Single Supervisory Mechanism: competitive implications for the banking sectors in the euro area
Iryna Okolelova and Jacob Bikker
International Journal of Finance and Economics

Forthcoming journal articles

A structural investigation of quantitative easing
Gregor Boehl, Gavin Goy and Felix Strobel
Review of Economics and Statistics

The interplay of financial education, financial inclusion and financial stability and the role of Big Tech
Nicole Jonker and Anneke Kosse
Contemporary Economic Policy

The impact of providing information about the ECB's instruments on inflation expectations and trust in the ECB: experimental evidence
Nils Brouwer and Jakob de Haan
Journal of Macroeconomics

Consumer willingness to share payments data: trust for sale?
Michiel Bijlsma, Carin van der Cruijsen and Nicole Jonker
Journal of Financial Services Research

Risk assessment of banknotes as a fomite of SARS-CoV-2 in cash payment transactions
Jack Schijven, Mark Wind, Daniel Todt, John Howes, Barbora Tamele and Eike Steinmann
Risk Analysis

Other publications

[The impact of QE on sovereign risk](#)
Dirk Broeders, Leo de Haan and Jan Willem van den End
SUERF Policy Brief

[De betaalmarkt kent voldoende winstgevende niches voor kleine bedrijven](#)
Hans Brits and Nicole Jonker
Economisch Statistische Berichten

[Bouwen voor ouderen kan gehele woningmarkt toegankelijker maken](#)
Dorinth van Dijk and Maarten van Rooij
Economisch Statistische Berichten

[Uncertainty shocks and the monetary-macroprudential policy mix](#)
Valeriu Nalban and Andra Smadu
SUERF Policy Brief

[Huizenprijzen voeden inflatieverwachtingen van huishoudens](#)
Ad Stokman
Economisch Statistische Berichten

For a complete list of publications see our [website](#)

Events

Research seminars

Past

19 April 2022: The Great Carbon Arbitrage
Alissa Kleinnijenhuis (Stanford University)

17 May 2022**:** The Impact of Alternative Forms of Bank Consolidation on Credit Supply and Financial Stability
Emanuele Tarantino (LUISS)

19 May 2022: Borrowing Premia in Unsecured Credit Markets
Felicia Ionescu (Fed Board)

31 May 2022: Deal or no Deal? The Effect of Time-to-Close on Residential Transaction Prices
Marc Francke (University of Amsterdam)

7 June 2022: The Bias and Efficiency of the ECB Inflation Projections: a State Dependent Analysis
Eleonora Granziera (Norges Bank)

14 June 2022: QE: Implications for Bank Risk-Taking, Profitability, and Systemic Risk
Supriya Kapoor (Trinity College Dublin)

Forthcoming

6 Sept 2022: TBA
Fabio Canova

20 Sept 2022: TBA

Markus Hertrich (Bundesbank)
27 Sept 2022: TBA
Daria Minina (University of Amsterdam)
18 Oct 2022: Dynamic Macroeconomic Implications of Immigration
Silvia Miranda-Agrippino (Bank of England)
15 Nov 2022: TBA
David Martinez-Miera (Universidad Carlos III de Madrid)

Other news

On May 12-13, De Nederlandsche Bank organized the conference "Central bankers go data driven: applications of Artificial Intelligence and Machine Learning for policy and prudential supervision".

On June 20-21, De Nederlandsche Bank, Sveriges Riksbank and the Deutsche Bundesbank organized the sixth Annual Macroprudential Conference.

Research highlights, details

1. A Structural Investigation on Quantitative Easing

Large-scale asset purchases (LSAPs), known as Quantitative Easing (QE), have become a primary tool for monetary policy once policy rates reached the zero (or effective) lower bound. Yet, despite their prominent role, the macroeconomic impact of these LSAPs – in particular their effect on inflation and output – remains subject to an open debate.

MethodologyThis research contributes to the literature by being first to investigate the effects of QE in a structural model that is estimated using US data until 2019. Crucially, by adopting a novel nonlinear Bayesian likelihood approach, the authors can fully account for the nonlinearity created by the zero lower bound on nominal interest rates. The data thus covers the period were the zero lower bound was binding and includes data of the Federal Reserve's balance sheet.

The cost channel of QE
The quantitative investigation uncovers a new channel through which the Federal Reserve's unconventional monetary policy measures may have lowered inflation. The authors document that – by lowering firms' costs for capital – the supply side effects of the asset purchases outweighed the inflationary effects stemming from an increase in aggregate demand, thereby reducing inflation. This is referred to as the cost channel of QE. The finding of supply side effects dominating the aggregate demand effects of QE thus provides a novel explanation for the period of low inflation in the United States.

Disinflationary effect
Quantitatively, the analysis suggests this disinflationary effect of LSAPs caused a fall in US inflation of about 0.9% annually. Specifically, by easing financing conditions for firms, LSAPs triggered a net increase in

aggregate investment of nearly 8 percent relative to a counterfactual scenario without asset purchases. In other words, LSAPs reduced the collapse of investment in the Great Recession by nearly 8 percent. This support to firms' production capacity reduced their marginal cost of production, which eventually put downward pressure on price dynamics.

Read more? See the publication "A Structural Investigation of Quantitative Easing", forthcoming in The Review of Economics and Statistics, by Gregor Boehl, Gavin Goy and Felix Strobel.
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2. The effect of introducing a Loan-to-Value limit on home ownership

Identification challenges
It is difficult to identify the LTV effect, as housing market conditions also affect the probability and timing of the transition to homeownership. To isolate the impact of the LTV limit from housing market conditions, we construct a treatment and control group. The treatment group consists of individuals whose parents have less than a given amount of financial wealth (50.000 euro in our baseline specification). The control group consists of individuals with wealthy parents who are (potentially) less credit constrained. The exogenous variation of LTV limits for liquidity-constrained and unconstrained households identifies the effect of this macroprudential instrument on the timing of home purchases.

Limited effect of LTV limit
The average duration between an individual's 18th birthday and first-time home ownership has increased since the introduction of the LTV limit. However, the effect of reducing the LTV limit on first-time home buyers' probability of becoming a homeowner is limited, as the difference between the treatment and the control group is approximately 6%. This finding suggests that other developments, notably rapidly increasing house prices, are more important. A potential explanation for the limited effect of the LTV limit on the transition to home ownership could be that Debt-Service-to-Income limits bind first and that LTV limits impose only a choice of what to buy and when given the maximum amount of potential debt.

Read more? See the DNB Working Paper 741 The effect of introducing a Loan -to- Value limit on home ownership by Cindy Biesenbeek, Mauro Mastrogiacomo, Rob Alessie and Jakob de Haan.
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3. Reactions of household inflation expectations to a symmetric inflation target and high inflation

ECB strategy review did not affect household inflation expectations
Over the past decade, the ECB and other monetary authorities in advanced economies have been confronted by persistently low inflation, motivating a review of their monetary strategies. A crucial element of this review has been the effort to anchor inflation expectations better. In this effort, central banks have also increasingly

focused on households inflation expectations. To assess the anchoring of inflation expectations held by households, we analyze the results from a monthly satellite survey of the DNB Household Survey. Our analysis focuses on the period between June 2021 and March 2022. On 8 July 2021, the ECB announced a new symmetric inflation target. We find that Dutch households' median expectations of euro area inflation ten years ahead did not change visibly following the introduction of a symmetric 2% inflation target. Also, short-term expectations changed only very little.

Household inflation expectations have become less well anchored though after the summer of 2021
In our monthly survey, we can distinguish the change in expectations in the weeks after the announcement of the ECB's new symmetric inflation target (on 8 July 2021) from the effect of the strong rise in inflation (to levels of 1 percentage point or more above target) that started in August. This is because the August 2021 survey was conducted after the announcement of the ECB's symmetric inflation target but before the publication in September 2021 of the HICP inflation data for August 2021. The survey responses show that households' median short- and long-term expectations of euro area inflation, as well as households' expected probabilities of high inflation (above 4%), have clearly risen since the past summer. Thus along with the substantial increase in inflation above target since mid-2021, long-term euro area inflation expectations of Dutch households have become less well anchored.

Implications
In the current environment of persistently high inflation, there are increasing concerns that inflation expectations have de-anchored in the euro area from above the ECB's inflation target. This could weaken the monetary transmission and threaten price stability. Our results reveal that households' inflation expectations have to an important extent been backward-looking and that with the strong increase in inflation since mid-2021, Dutch consumers have been increasingly concerned about inflation significantly above the ECB's aim.

Read more? See DNB Working Paper 743 Reactions of household inflation expectations to a symmetric inflation target and high inflation
Gabriele Galati, Richhild Moessner and Maarten van Rooij
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4. Consequences of the war in Ukraine for the economy of the Netherlands

Broad implications of the war
The war in Ukraine is a tragedy causing tremendous human suffering and material damage. The Netherlands and many other Western countries responded with sanctions that have major consequences for the Russian economy, its financial system and its currency. Many companies have also independently decided to end their relationship with, or activities in, Russia. Therefore, through many different channels, the war is a financial and economic shock that has broad implications.

Consequences for the Netherlands

The economic consequences for the Netherlands are most noticeable in the energy prices. Rising geopolitical tensions and the military invasion of Ukraine are causing uncertainty concerning energy supply, resulting in steep additional price increases for oil and gas. In addition, the geopolitical situation also intensifies bottlenecks in the supply and transportation of other raw materials and commodities. As a result, many products have continued to rise in price, which is reflected in high inflation.

Updated projections with many uncertainties

High inflation, slower world trade growth and increased uncertainty will act as a drag on the initially strong growth recovery after the COVID-19-induced recession. In the updated projections for the Netherlands, growth in gross domestic product (GDP) in 2022 and 2023 taken together amounts to about 0.2 percentage points less than was forecast in December. In an alternative scenario, in which among other things high energy prices prevail for a longer period of time, inflation will peak at 9.5% in 2022 and then decline to 3.4% in 2023. In this scenario, economic growth in the Netherlands slows by 1.1 percentage points per year on average in 2022 and 2023. It is important to note that this scenario involves many uncertainties, as at present it is completely unclear how the war in Ukraine will play out.

Read more?

See DNB Analysis Consequences of the war in Ukraine for the economy of the Netherlands by Robert-Paul Berben, Thomas van den Berg, Wilko Bolt, Menno Broos, Jan Willem van den End, Gerbert Hebbink, Kasper Goosen, Minke van der Heijden, Íde Kearney, Dylan Pastoor, Marc Reinke, Ilona van Schaik and Guido Schotten.

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5. DNB-Riksbank-Bundesbank 6th Annual Macroprudential Conference - June 20-21 2022

Klaas Knot (Governor of De Nederlandsche Bank) opened the conference with an insightful speech that touched upon the history, design, and role of macroprudential policies for maintaining financial stability. He outlined some avenues to further develop macroprudential frameworks, including climate change, cyber risks, competition and regulation, among others.

The keynote speaker Pablo Hernández de Cos (Governor of Banco de España) shared his views on development of macroprudential frameworks, including the ongoing consultation for reform within Europe. First, policies need to be conducted in a more proactive, forward-looking manner. Next, capital buffers should be a part of holistic frameworks that incorporate the whole financial system, including banks as well as nonbank financial institutions. Finally, frameworks should be flexible to respond to structural changes and diverse shocks, such as climate change and cyber risks. This requires policy coordination and suitable monitoring and analytical tools.

In the first session, Johannes Stroebel (NYU) proposed a new approach to constructing optimal climate risk hedge portfolios, based on trading responses to news shocks received from investors. Local extreme heat events are used as shifters of investors' climate change concerns. This

approach can also work well for hedging national house price and unemployment series.
Next, Xavier Vives (IESE Business School) presented a model of spatial competition in lending market where lenders - banks and Fintech - compete to provide loans to entrepreneurs and tailor monitoring to entrepreneurs' location. Based on the model, Fintech entry increases social welfare when its market share is large and Fintech monitoring efficiency is adequate.
Dimitri Vayanos (LSE) and Gikas Hardouvelis (University of Piraeus) provided a narrative of the Greek economic and financial crisis during 2008-2014 and the evolution of its banking system in the recent decade. The authors discussed policy actions aimed at banks, namely recapitalizations and resolutions, as well as measures taken to reduce non-performing exposures.
The policy panel with Elga Bartsch (Blackrock Investment Institute), Carmen M. Reinhart (World Bank Group), and Axel Weber (Center for Financial Studies, Goethe University), moderated by Olaf Sleijpen (DNB), featured a lively discussion on post-pandemic economic recovery, implications for financial stability, and inflation. The panelists talked about high levels of public and private debt and financial risks they entail amid the exit from the low-for-long interest rate environment. Other discussed topics covered the reversal of globalization and fragmentation in global integration, the drivers of returning inflation and tradeoffs for central banks on their path to monetary policy normalization.
On the second day, Marco Pagano (University of Naples Federico II, CSEF, EIEF) presented the paper on government loan guarantees in the euro area during the Covid-19 pandemic. Guaranteed loans were mostly extended to small but less risky firms in severely affected sectors, borrowing from large, strong banks, and partially substituted pre-existing non-guaranteed debt.
Next, Jason Healey and Rachel Adeney (Columbia University) discussed data and information available to access cyber risks to financial stability, capturing such aspects as cybersecurity, incident-based and threat intelligence data as well as evaluation of economic and business impact of cyber-attacks.
Lastly, Hyun Shin (BIS) studies strategic complementarities in the payment system in the era of ample reserves, using the U.S. Fedwire Funds Service. Payments data can be applied to examine implications of central bank balance sheet reduction for functioning of payment systems.
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